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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,736	04/16/2001	Mor Allon	CUC-117	5657

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EXAMINER	
SALTARELLI, DOMINIC D	

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/835,736	ALLON ET AL.	
	Examiner	Art Unit	
	Dominic D. Saltarelli	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed September 2, 2005 have been fully considered but they are not persuasive.

First, applicant argues that applicant's disclosure does not explain that it is known to reconvert signals from QAM format into QPSK format (applicant's remarks, page 8).

In response, it must be noted that the office action mailed on June 3, 2005, did not attempt to assert this. The teachings found in applicant's disclosure and subsequently relied upon in both the prior and immediate office actions is the fact that it is known, in systems that utilize signal conversion to carry a multiplex of signals from a bank of receiving antennae to subscriber households, it is known to reconvert signals back into the form they were originally received in, as this would alleviate the need for special receivers in the home that could each receive the specialized multiplex of signals. When this teaching that is found within applicant's disclosure is applied to the system disclose by Oichi, the result is to reconvert QAM modulated signals into QPSK signals, because Oichi teaches originally converting QPSK signals into QAM signals.

Second, applicant argues that there is no motivation to convert QAM formatted signals into QPSK signals in the system of Oishi (applicant's remarks, page 9).

In response, examiner notes that the invention disclosed by Oichi requires specialized CS tuners to be provided to subscriber's in order to receive the converted signals (paragraph 52). Yet the solutions to similar problems that are shown to be known by the applicant involve converting signals back into the form that is receivable by conventional receiver equipment, wherein said teaching provide a clear benefit to one of ordinary skill in the art for modifying the system disclosed by Oichi, namely, alleviating the need for specialized tuners in subscriber's receivers in order to receives all of the signals in the multiplex.

Claim Objections

2. Claim 4 is objected to because of the following informalities: Line 3 reads "claim 1" and should be changed to --claim 3--. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oishi et al. (US 2002/0056140 A1) [Oishi] in view of applicant's own disclosure.

Regarding claim 1, Oishi discloses a system to increase the capacity of satellite intermediate frequency signal distribution networks (paragraphs 17-19), of the type that are comprised of a header which receives the channels with the original signals in QPSK format, in the header some of the channels are processed at QAM format (CS signals are received in QPSK form and converted to 64-QAM; paragraph 41), the header output signals which are sent to a user converter (CS signals are received in QAM form, paragraphs 39-40 and 52 by CS tuner 13, shown in fig. 4) which sends its output signal to a user's TV (fig. 4, television 11).

Oishi fails to disclose the converter converts the QAM modulation format into QPSK modulation format and the TV is a QPSK TV.

However, applicant's own disclosure states that it is known to convert signals back into the original form prior to IF modulation so that they may be processed by conventional receiver equipment (applicant's disclosure describes a reverse group converter CPI1 which returns signals to their original form so that they may be processed by user receiver IRD1, page 3, lines 25-27).

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Oishi to convert the QAM modulation format back into QPSK modulation format at the converter and

sending the resultant QPSK signal to a QPSK TV, for the benefit of enabling a conventional satellite receiver to process the received signals.

Regarding claim 2, Oishi discloses the system of claim 1, wherein the converter has a tuner (fig. 4, CS tuner 13) which selects the UHF frequency margin where the processor channels with QAM format to be processed are found (paragraph 68), and converts them into a lower frequency, which can be treated by a QAM demodulator obtaining at the output the original basic band signal which is processed by a QPSK encoder which supplies the I and Q signals necessary for a later modulator which generates a radiofrequency signal in a low value frequency modulated in QPSK format which is delivered to an agile converter which transfers it to the frequency margin included within the FIS (these are the steps for reconverting the QAM modulated signals back into their original QPSK format as per the modification made above regarding claim 1) and whose output supplies a selector switch which selects, by means of a control microprocessor , the origin of signals to be presented at the output of the selector switch (within television receiver 11, users input signals which control the switching between the Video(1), Video(2), and RF input terminals, paragraphs 55-56) which in one position selects the signals in QPSK format which originally belonged to the processed channels (the Video(2) selection, which carries the CS signals which were converted to QAM) and in another position selection the

original signals not processed in QAM format (the Video(1) selection, which carries the BS signals which were never converted to QAM).

Regarding claim 3, Oishi discloses the system of claim 1, wherein the header has transparent digital transmodulators (fig. 4, format conversion unit 4, paragraph 58) to transform the QPSK format of some of the original channels into QAM modulation format situation in another position of the spectrum for the processed channels (CS channels are shifted to new bands after conversion to QAM, paragraph 41).

Regarding claim 4, Oishi discloses the system of claim 3, wherein the header has a signal adder (fig. 4, mixer 5) wherein the QAM signals generated by the TDTs (fig. 4, format conversion unit 4, paragraph 58) mix with the rest of QPSK signals not processed (from receiver 2, shown in fig. 4) and with terrestrial television diffusion signals (from antenna 3A and 3B, shown in fig. 4) to form a multiplex of different kinds of signals (paragraph 49).

Regarding claim 5, Oishi discloses the system of claim 2, wherein the converter has a filter at whose auxiliary output the terrestrial diffusion analog signals are available (distributor circuit 42 provides the RF output which provides the terrestrial broadcast signals to the television receiver, paragraph 67).

Regarding claims 6 and 7, Oishi discloses the system of claim 2, wherein the control microprocessor is governed in turn by the user receiver through a communications port (users select input sources, paragraph 56, and channels for display, paragraphs 81-83). Oishi fails to disclose the communications port is an RS-232 port.

Examiner takes official notice that RS-232 ports are an industry standardized I/O port for transferring data, and is especially suitable for low bandwidth command data.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Oishi to utilize an RS-232 port, an industry standardized I/O communications port.

Regarding claim 8, Oishi discloses the system of claim 4, wherein the multiplexed signals are transported to the subscriber's home by means of a coaxial cable (fig. 4, cable 10).

Conclusion

5. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dominic D. Saltarelli whose telephone number is (571) 272-7302. The examiner can normally be reached on Monday - Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on (571) 272-7294. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dominic Saltarelli
Patent Examiner
Art Unit 2611

DS

HAI TRAN
PRIMARY EXAMINER